

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: :
: Group Art Unit: 2189
Michael T. Rowan et al. :
: Examiner: Gu, Shawn X.
Appln. No.: 10/668,833 :
: Confirmation No.: 4989
Filed: September 23, 2003 :
: Customer No.: 21967
For: SYSTEM AND METHODS FOR TIME :
DEPENDENT DATA STORAGE AND :
RECOVERY :

Mail Stop AF
Commissioner for Patents
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REQUEST FOR PRE-APPEAL BRIEF CONFERENCE

Pursuant to the Pre-Appeal Brief Conference Pilot Program announced in the Official Gazette, Applicants hereby request a pre-appeal brief conference in the above-referenced patent application.

The present patent application was filed on September 23, 2003. Starting with Applicants' response to an initial Office Action dated November 21, 2005, Applicants have repeatedly attempted to convince the Examiner that the cited references clearly fail to teach, or even suggest, the claimed invention. However, the Examiner continues to maintain his rejection of claims 1-29, which is certain to be overturned on appeal. Rather than spending further time reiterating the same arguments clearly establishing that the cited references fail to teach, or even suggest, the claimed invention, Applicant has elected to pursue the Pilot Program.

I. THE INDEFINITENESS REJECTION OF CLAIM 17

In the most recent Advisory Action, the Examiner notes that claim 17 remains rejected under 35 U.S.C. § 112, second paragraph. If prosecution is reopened, or the claims are otherwise deemed allowable at this pre-appeal stage or other appeal, Applicants would like the opportunity to amend claim 17 to remove the rejection.

II. THE ANTICIPATION REJECTION OF CLAIMS 1-10, 13-19, AND 21-29

Claims 1-10, 13-19, and 21-29 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,981,114 ("Wu"). This rejection is hereby respectfully traversed.

Under 35 U.S.C. § 102, the Patent Office bears the burden of presenting at least a prima facie case of anticipation. In re King, 801 F.2d 1324, 1326 (Fed. Cir. 1986). Anticipation requires that a prior art reference disclose, either expressly or under the principles of inherency, each and every element of the claimed invention. Celeritas Tech., Ltd., v. Rockwell Int'l Corp., 150 F.3d 1354, 1361 (Fed. Cir. 1998).

Regarding claim 1, the Examiner asserts that Wu discloses the claimed invention. Applicants respectfully disagree. Specifically, Applicants respectfully submit that Wu fails to disclose, or even suggest, at least a method having a "current store representing a current state of the storage system. . .," as presently claimed. In contrast, Wu discloses a system whereby snapshots are created to back up and restore a computer system. Modification logs may be maintained in order to reconstruct a snapshot from an existing snapshot and one or more modification logs. See Wu, Title; col. 2, ll. 16-18. Snapshots of a target system are created. Modification logs are maintained to capture the changes between one snapshot and the next snapshot. Wu, col. 6, ll. 14-23. If the number of snapshots is greater than a limit, for example, the allowable disk space, one or more snapshots is deleted. Wu, col. 5, l. 59 - col. 6, l. 9. Modification logs are used in order to recreate snapshots that have been deleted, either through "forward" modification logs, to recreate a snapshot from an earlier snapshot, or through "backward" modification logs, to recreate a snapshot from a later snapshot. Wu, col. 8, ll. 51-66. If modifications are identified in the modification logs by creation time, then point-in-time snapshots may be constructed. Wu, col. 9, ll. 45-61. Thus, Wu discloses recreating snapshots from existing snapshots. That is, Wu discloses using an existing snapshot, and then applying one or more modification logs in order to recreate a different snapshot, either through the application of a "forward" modification log or a "backward" modification log. In view of the foregoing, Applicants accordingly respectfully submit that Wu does not disclose maintaining a current store for restoring a storage system to any previous point in time. Thus, Applicants accordingly further respectfully submit that claim 1 is allowable over Wu.

Additionally, the Examiner asserts that the mirrored volumes 240 in Wu are congruent to the current store. Applicants respectfully disagree. Wu discloses a method of snapshot creation by "mirroring the original volume onto a mirrored volume. . . synchronized to the original volume" so that the volume manager may disconnect the mirror and use it as a snapshot. See Wu, col. 5, ll. 6-16. The mirrors are copies of the original volume for use as point-in-time snapshots and, once disconnected, are not updated with "current" data.

At this point, Applicants would like to remind the Examiner that, as stated in MPEP § 2131, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631 (Fed. Cir. 1987).

Regarding claims 2-10, 13, 26, and 27, these claims are dependent upon independent claim 1. Thus, since independent claim 1 should be allowable as discussed above, claims 1-10, 13, 26, and 27 should also be allowable at least by virtue of their dependency on independent claim 1.

Regarding claim 14, the Examiner asserts that Wu discloses the claimed invention. Applicants respectfully disagree. First, this claim recites subject matter related to claim 1. Thus, the arguments set forth above with respect to claim 1 are equally applicable to claim 14. Accordingly, it is respectfully submitted that claim 14 is allowable over Wu for the same reasons as set forth above with respect to claim 1. Additionally, Applicants respectfully submit that Wu fails to disclose, or even suggest, at least that "the time store is identified as a location of the old data if the old data was overwritten after the specified time, and the current store is identified as a location of the old data if the old data was not overwritten after the specified time," as presently claimed. In contrast, Wu, as described in greater detail above, discloses a system whereby snapshots are created to back up and restore a computer system. Modification logs may be maintained in order to reconstruct a snapshot from an existing snapshot and one or more modification logs. See Wu, Title; col. 2, ll. 16-18. Wu does not disclose maintaining a current store, which may be used to restore a storage system to any previous point in time. Accordingly, Applicants also respectfully submit that claim 14 is allowable over Wu.

Regarding claims 15-19 and 28, these claims are dependent upon independent claim 14. Thus, since independent claim 14 should be allowable as discussed above, claims 15-19 and 28 should also be allowable at least by virtue of their dependency on independent claim 14.

Regarding claim 21, this claim recites subject matter related to claim 1. Thus, the arguments set forth above with respect to claim 1 are equally applicable to claim 21. Accordingly, it is respectfully submitted that claim 21 is allowable over Wu for the same reasons as set forth above with respect to claim 1.

Regarding claim 22, this claim is dependent upon independent claim 21. Thus, since independent claim 21 should be allowable as discussed above, claim 22 should also be allowable at least by virtue of their dependency on independent claim 21.

Regarding claim 23, the Examiner asserts that Wu discloses the claimed invention. Applicants respectfully disagree. First, this claim recites subject matter related to claim 14. Thus, the arguments set forth above with respect to claim 14 are equally applicable to claim 23, and therefore that claim 23 is allowable over Wu for the same reasons as set forth above with respect to claim 14. Additionally, Applicants respectfully submit that Wu fails to disclose, or even suggest, at least "continuously indexing by timestamp old data to be overwritten with new data prior to execution of each write command," as presently claimed. In contrast, Wu, as described in greater detail above, discloses a system whereby snapshots are created to back up and restore a computer system. Modification logs may be maintained in order to reconstruct a snapshot from an existing snapshot and one or more modification logs. See Wu, Title; col. 2, ll. 16-23. Wu discloses using modification logs to create deleted snapshots, but does not disclose "continuously indexing by timestamp old data to be overwritten with new data prior to execution of each write command" as recited in claim 23. Moreover, Wu discloses "detect[ing]" modifications via a modification manager. See Wu, col. 6, ll. 14-25. Wu does not disclose indexing by timestamp old data prior to execution of each write command. Accordingly, Applicants further respectfully submit that claim 23 is allowable over Wu.

Regarding claims 24, 25, and 29, these claims are dependent upon independent claim 23. Thus, since independent claim 23 should be allowable as discussed above, claims 24, 25, and 29 should also be allowable at least by virtue of their dependency on independent claim 23.

Regarding claims 1, 14, and 21, these claims recite subject matter related to claim 23. Thus, the arguments set forth above with respect to claim 23 are equally applicable to claims 1, 14, and 21. Accordingly, Applicants additionally respectfully submit that claims 1, 14, and 21 are allowable over Wu for the same additional reasons set forth above with respect to claim 23.

In view of the foregoing, it is respectfully requested that the anticipation rejection of claims 1-10, 13-19, and 21-29 be withdrawn.

III. THE OBVIOUSNESS REJECTION OF CLAIMS 11, 12, AND 20

Claims 11, 12, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wu in further view of "UNIX in a Nutshell" ("Gilly"). This rejection is hereby respectfully traversed.

It is respectfully submitted that the aforementioned obviousness rejection of claims 11, 12, and 20 has become moot in view of the deficiencies of the primary reference (i.e., Wu) as discussed above with respect to independent claims 1, 14, 21, and 23. That is, claims 11 and 12 are dependent upon independent claim

1 and thus inherently incorporate all of the limitations of independent claim 1. Similarly, claim 20 is dependent upon independent claim 14 and thus inherently incorporate all of the limitations of independent claim 14. Also, the secondary reference (i.e., Gilly) fails to disclose, or even suggest, the deficiencies of the primary reference as discussed above with respect to independent claims 1 and 14. Indeed, the Examiner does not even assert such. Thus, the combination of the secondary reference with the primary reference also fails to disclose, or even suggest, the deficiencies of the primary reference as discussed above with respect to independent claims 1 and 14. Accordingly, claims 11, 12, and 20 should be allowable over the combination of the secondary reference with the primary reference at least by virtue of their dependency on independent claims 1 and 14.

In view of the foregoing, it is respectfully requested that the obviousness rejection of claims 11, 12, and 20 be withdrawn.

IV. CONCLUSION

In view of the foregoing, it is respectfully submitted that the rejections of claims 1-29 are in error. Accordingly, Applicant requests an appeal conference be convened so as to advise Applicant whether the Office will: 1) allow the present claims; 2) reopen prosecution and issue a new office action; or 3) allow this case to proceed to appeal.

Please charge any shortage in fees due in connection with the filing of this communication to Deposit Account No. 50-0206, and please credit any excess fees to such deposit account.

Respectfully submitted,


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Date: August 22, 2008